

**DEPARTMENT OF TRANSPORTATION****DIVISION OF ENGINEERING SERVICES**

Office of Structural Materials

Quality Assurance and Source Inspection



Bay Area Branch

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Contract #: 04-0120F4Cty: SF/ALA Rte: 80 PM: 13.2/13.9File #: 69.28**WELDING INSPECTION REPORT****Resident Engineer:**Pursell, Gary**Address:** 333 Burma Road**City:** Oakland, CA 94607**Report No:** WIR-013635**Date Inspected:** 13-Apr-2010**Project Name:** SAS Superstructure**OSM Arrival Time:** 1900**Prime Contractor:** American Bridge/Fluor Enterprises, a JV**OSM Departure Time:** 700**Contractor:** Zhenhua Port Machinery Company, Ltd (ZPMC), Changxing Island **Location:** Shanghai, China**CWI Name:** See Below**CWI Present:** Yes No**Inspected CWI report:** Yes No N/A**Rod Oven in Use:** Yes No N/A**Electrode to specification:** Yes No N/A**Weld Procedures Followed:** Yes No N/A**Qualified Welders:** Yes No N/A**Verified Joint Fit-up:** Yes No N/A**Approved Drawings:** Yes No N/A**Approved WPS:** Yes No N/A**Delayed / Cancelled:** Yes No N/A**Bridge No:** 34-0006**Component:** OBG**Summary of Items Observed:**

CWI Inspectors: Mr. Geng Wei, Mr. Zhou Cheng

On this date CALTRANS OSM Quality Assurance (QA) Inspector, Mr. Paul Dawson, arrived on site at the Zhenhua Port Machinery Company (ZPMC) facility at Changxing Island, in Shanghai, China, for the purpose of monitoring welding and fabrication of the San Francisco / Oakland Bay Bridge (SFOBB) components. This QA Inspector observed the following:

OBG Bay 14

ZPMC issued "Inspection Notification Sheet" number 5519 informing Caltrans QA that ZPMC will perform ultrasonic inspections of eight OBG segment 12BE welds at 1620 hours and they will then be ready for Caltrans QA personnel to perform ultrasonic inspections of these welds. ABF representative Mr. Yang Chao informed this QA Inspector that he had been informed by ZPMC QC personnel that ZPMC ultrasonic inspectors were only required to perform UT of 25% of these welds and that ZPMC had completed ultrasonic inspections of welds SEG3002G-004 @ panel point 113.5 and SEG3002J-011 @ panel point 113. This QA Inspector performed random visual and ultrasonic inspections of approximately 50% length of welds: SEG3002G-004 and SEG3002J-011 and items observed by this QA Inspector appear to comply with AWS D1.5 UT requirements. For additional information on these inspections see the TL6027 Ultrasonic Test Report and the photograph below.

This QA Inspector observed ZPMC welder Mr. Zhao Jibo, stencil 055564 is using flux cored welding procedure WPS-345-FCAW-2G(2F)-Repair to make OBG weld repair SEG3002N-031 at OBG segment 12CE, panel point

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114 as directed by weld repair document B-WR11612. This QA Inspector observed a welding current of 280 amps and 29 volts. This QA Inspector observed that Mr. Zhao Jibo appears to be certified to make this weld. Items observed on this date appeared to generally comply with applicable contract documents.

This QA Inspector observed ZPMC welder Mr. Jin Chen Mao, stencil 058551 is using flux cored welding procedure WPS-345-FCAW-2G(2F)-Repair to make OBG weld repair SEG3002M-074 at OBG segment 12CE, panel point 114 as directed by weld repair document B-WR11611. This QA Inspector observed a welding current of 290 amps and 29 volts. This QA Inspector observed that Mr. Jin Chen Mao appears to be certified to make this weld. Items observed on this date appeared to generally comply with applicable contract documents.

This QA Inspector observed ZPMC welder Mr. Zhang Quin Quan, stencil 044774 is using flux cored welding procedure WPS-B-T-2233-TC-U4b-F to make OBG segment 12CE welds SEG3003E-133 and SEG3003E-134. This QA Inspector observed QC has recorded a welding current of 215 amps, 24.7 volts and Mr. Zhang Quin Quan appears to be certified to make this weld. Items observed on this date appeared to generally comply with applicable contract documents.

This QA Inspector observed ZPMC welder Mr. Hong Yong Li, stencil 044801 is using flux cored welding procedure WPS-B-T-2233-TC-U4b-F to make OBG segment 12CE welds SEG3003D-141 and SEG3003D-142. This QA Inspector observed QC has recorded a welding current of 210 amps, 25.4 volts and Mr. Hong Yong Li appears to be certified to make this weld. Items observed on this date appeared to generally comply with applicable contract documents.

This QA Inspector observed ZPMC welder Mr. Bian Henggui, stencil 051359 is using shielded metal arc process WPS-345-SMAW-2G(2F)-FCM-Repair to make corner assembly repair weld CA6501-004. This corner assembly will be installed at segment 12CE. This QA Inspector observed the shielded metal arc welding electrodes are being stored in an electrically heated electrode storage container and Mr. Bian Henggui appears to be certified to make this weld. Items observed on this date appeared to generally comply with applicable contract documents.

This QA Inspector observed ZPMC welder Mr. Lv Fengbao, stencil 045175 is using flux cored welding procedure WPS-B-T-2232-TC-U4b-F to make OBG segment 12AW weld SEG3004V-051R (right side). This QA Inspector observed ZPMC QC has recorded a welding current of 302 amps and 30.5 volts. This QA Inspector observed Mr. Lv Fengbao appears to be certified to make this weld. Items observed on this date appeared to generally comply with applicable contract documents.

This QA Inspector observed ZPMC welder Ms. Wang Lanying, stencil 045265 is using submerged arc welding procedure specification WPS-B-T-223(2)-1T-1 to make groove weld SEG073\*-009. This QA Inspector observed ZPMC QC has recorded a welding current of 595 amps and 31.2 volts and Ms. Wang Lanying appears to be certified to make this weld. Items observed on this date appeared to generally comply with applicable contract documents.

This QA Inspector observed ZPMC welder Ms. Hue Junrong, stencil 201215 is using flux cored welding procedure WPS-B-T-2131T-2 to make OBG segment 11BW weld SEG073A-010. This QA Inspector observed QC has recorded a welding current of 232 amps and 29 volts. This QA Inspector observed Ms. Hue Junrong

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appears to be certified to make this weld. Items observed on this date appeared to generally comply with applicable contract documents.

This QA Inspector observed ZPMC welder Ms. Xie Jin Xia, stencil 048038 is using flux cored welding procedure WPS-B-T-2232-TC-U4b-F to make welds between OBG 12CE deck plate DP3006-001 and diaphragm plates. This QA Inspector measured a welding current of approximately 270 amps and 28 volts. This QA Inspector observed the base material appears to have been preheated with a torch prior to welding and Ms. Xie Jin Xia appears to be certified to make this weld. Items observed on this date appeared to generally comply with applicable contract documents.

This QA Inspector observed ZPMC welder Ms. Chen Fenglian, stencil 206623 is using flux cored welding procedure WPS-B-T-2232-DTC-U4b-F to make OBG segment 12CE, deck plate welds between diaphragm plates and deck plate DP3007-001. This deck plate weld is being made near the center of OBG Bay 14 and after the diaphragm welds are completed, this plate will be turned over then it will be installed near panel point 112. This QA Inspector observed a welding current of approximately 290 amps and 29 volts. This QA Inspector observed that Ms. Chen Fenglian appears to be certified to make this weld. Items observed on this date appeared to generally comply with applicable contract documents.

### Summary of Conversations:

See Above.

### Comments

This report is for the purpose of determining conformance with the contract documents and is not for the purpose of making repair or fit for purpose recommendations. Should you require recommendations concerning repairs or remedial efforts please contact Eric Tsang phone: 150-0042-2372 , who represents the Office of Structural Materials for your project.

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<b>Inspected By:</b>	Dawson,Paul	Quality Assurance Inspector
<b>Reviewed By:</b>	Carreon,Albert	QA Reviewer

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